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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jonathan O. Owens HAVERSTOCK & OWENS LLP 162 North Wolfe Road Sunnyvale, CA 94086			EXAMINER STRANGE, AARON N	
			ART UNIT 2448	PAPER NUMBER
			MAIL DATE 09/24/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/759,557

Applicant(s)

EYITCHISON, EDWARD

Examiner

AARON STRANGE

Art Unit

2448

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/13/09 have been fully considered but they are not persuasive.

2. With regard to claim 1, and Applicant's assertion that Cheng teaches away from "a rendezvous type protocol utilizing Internet protocol" (Remarks 12), the Examiner respectfully disagrees.

Applicant appears to equate Cheng's failure to bridge the UPnP devices (connected to an IP network) with devices connected to another, non-UPnP, IP network as teaching away from such a modification. However, failure to teach is different from teaching away. At no point does Cheng state that non-UPnP devices connected to an IP network could not or should not utilize the bridge taught by Cheng.

Although Applicant asserts that "the main purpose of Cheng is to bridge devices in an IP network to one or more non-IP networks" (Remarks 12), there is no evidence to support such an assertion. While Cheng does describe "coupling IP networks to non-IP networks" as being an object of the invention (§8), Cheng additionally states that "[i]t is a further object of this invention to provide a method and system that allows for the control of non-UPnP-compliant devices from a UPnP compliant controller" (§8) and to "enable the control of non-UPnP-compliant slave devices without modification to the slave devices" (§8). Furthermore, Cheng states that the invention comprises "[a] bridging device [that] couples an IP (Internet Protocol) network to one or more non-IP

networks, *in order to facilitate* the control of non-UPnP (universal Plug and Play) devices by a UPnP controller on the IP network” (Abstract), suggesting that the primary goal of the invention is to enable control of non-UPnP devices by the UPnP controller rather than merely bridging IP and non-IP networks.

Cheng's failure to teach interfacing the UPnP devices with non-UPnP devices on an IP network simply does not teach away from such a modification. Cheng's disclosed purpose of allowing control of non-UPnP devices from a UPnP controller without requiring modification of the non-UPnP devices would have been furthered by such a modification. One of ordinary skill in the art could have easily modified Cheng's bridge to communicate with rendezvous type devices and would have seen the benefits of doing so, such as allowing control of all devices on the network from a single controller.

3. Cheng discloses a system and method for bridging communications between UPnP devices and non-UPnP devices (Abstract), wherein communications between the devices are translated into the appropriate format by a processor in a bridging device (¶¶21-22). Cheng does disclose that the bridging device may interface with several devices via one or more exemplary non-IP networks (¶¶21). However, Cheng also recognizes that communications standards are constantly being developed, and that the types of networks used in the future were likely to differ (¶¶5).

One such standard that was developed after Cheng's invention was Apple Computer, Inc.'s Rendezvous technology, disclosed by Cheshire. Cheshire teaches that

the Rendezvous technology utilizes IP to allow devices to self configure and announce their presence to other devices (§25-27).

One of ordinary skill in the art, when made aware of Apple's Rendezvous technology, would have recognized that it could be used to communicate between devices in a manner similar to USB, Bluetooth, HomeRF and the other protocols used by Cheng (§18). One of ordinary skill in the art would have also recognized that connecting a Rendezvous network to Cheng's UPnP bridge would have advantageously allowed the devices attached to the rendezvous network to communicate with UPnP compliant devices. Using Rendezvous to communicate between some of the non-UPnP devices in Cheng's system would have been nothing more than a predictable variation of the other network protocols used as examples by Cheng.

4. Regarding new claims 46 and 47, it is noted that Applicant has failed to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made, As required by 37 CFR 1.111(c). However, since claims 46 and 47 appears to contain no subject matter that is not also contained in claims 1-45, it has been assumed that Applicant's arguments with respect to the remaining independent claims are applicable to claims 46 and 47.

Applicant is reminded that the requirement to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited applies to new claims as well as claims that are amended.

5. Applicant's arguments with respect to claims 19, 28, 37, 44 and 45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-18, 20-27, 29-36, 38-44, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US PGPub 2002/0078161) in view of Cheshire (US PGPub 2005/0044355).

8. In regards to claims 1 and 46 Cheng discloses, a method of bridging communications between a universal plug and play type device (**Fig. 1 #120**) and a rendezvous type device (**Fig. 1 #150-180**) (**¶0018 line(s) 1-5**) comprising:

- a. receiving a communication from the universal plug and play type device for the rendezvous type device (**¶0022 line(s) 1-4**);
- b. converting the communication into the rendezvous type protocol thereby forming a converted communication (**¶0022 line(s) 6-8**); and

- c. transmitting the converted communication to the rendezvous type device
(¶0022 line(s) 8-12).
9. Cheng do not teach wherein the rendezvous type protocol utilizes Internet Protocol.
10. In the same field of endeavor Cheshire's teach rendezvous devices **(fig. 1 #102-110)** on a network **(fig. 1 #100)** using the Internet Protocol **(¶0025-0027).**
11. It would have been obvious to one of ordinary skill in the art to have rendezvous devices in an IP network taught by Cheshire for communicating with UPnP devices through a bridge as shown in Cheng, since the operation of the bridge is in no way dependent upon the type of network that the devices reside on, the combination with an IP network to achieve the predictable results of being able to communicate from UPnP devices to non-UPnP devices.
12. In regards to claims 2, 7, 12, 21, and 30 Cheng discloses, wherein the universal plug and play type device is coupled within a network of universal plug and play type devices **(Fig. 1 #100 and ¶0020 line(s) 12-19).**

13. In regards to claims 3, 8, 13, 22, and 31 Cheng discloses, wherein the rendezvous type device is coupled within a network of rendezvous type devices (**Fig. 1 #100 and ¶0020 line(s) 12-19**).

14. In regards to claims 4, 9, 14, and 39 Cheng discloses, wherein converting the communication is performed by a conversion circuit (**Fig. 2 #220 and ¶0022**).

15. In regards to claims 5, 10, 15, 33, and 40 Cheng discloses, wherein the conversion circuit is programmed by the universal plug and play type device or the rendezvous type device (**¶0040-¶0042**).

16. In regards to claims 6 and 47 discloses, a method of bridging communications between a rendezvous type device (**Fig. 1 #150-180**) and a universal plug and play type device (**Fig. 1 #120**) (**¶0018 line(s) 1-5**) comprising:

- d. a. receiving a communication from the rendezvous type device for the universal plug and play type device (**¶0022 line(s) 1-4**);
- e. b. converting the communication into the universal plug and play type protocol thereby forming a converted communication (**¶0022 line(s) 6-8**); and
- f. c. transmitting the converted communication to the universal plug and play type device (**¶0022 line(s) 8-12**).

17. Cheng do not teach wherein the rendezvous type protocol utilizes Internet Protocol.

18. In the same field of endeavor Cheshire's teach rendezvous devices (**fig. 1 #102-110**) on a network (**fig. 1 #100**) using the Internet Protocol (**¶0025-0027**).

19. It would have been obvious to one of ordinary skill in the art to have rendezvous devices in an IP network taught by Cheshire for communicating with UPnP devices through a bridge as shown in Cheng, since the operation of the bridge is in no way dependent upon the type of network that the devices reside on, the combination with an IP network to achieve the predictable results of being able to communicate from UPnP devices to non-UPnP devices.

20. In regards to claim 11 Cheng discloses, a converter (**Fig 1 #200**) configured to couple between a universal plug and play type device (**Fig. 1 #120**) and a rendezvous type device (**Fig. 1 #150-180**) to convert communications between the universal plug and play type device and the rendezvous type device into proper formats (**¶0020 line(s) 12-19**), comprising:

- g. a. a universal plug and play type interface circuit configured to couple to a universal plug and play type device operating under a universal plug and play type protocol (**Fig. 2 #210 and ¶0022 line(s) 1-6**);
- h. b. a rendezvous type interface circuit configured to couple to a rendezvous type device operating under a rendezvous type protocol (**Fig. 2 #250_{a-d} and ¶0021**); and

- i. c. a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit (**Fig. 1 #200 and Fig. 2**), wherein the conversion circuit converts communications directed from the universal plug and play type device to the rendezvous type device into the rendezvous type protocol, and further wherein the conversion circuit converts communications directed from the rendezvous type device to the universal plug and play type device into the universal plug and play type protocol (**¶0022**).
21. Cheng do not teach wherein the rendezvous type protocol utilizes Internet Protocol.
22. In the same field of endeavor Cheshire's teach rendezvous devices (**fig. 1 #102-110**) on a network (**fig. 1 #100**) using the Internet Protocol (**¶0025-0027**).
23. It would have been obvious to one of ordinary skill in the art to have rendezvous devices in an IP network taught by Cheshire for communicating with UPnP devices through a bridge as shown in Cheng, since the operation of the bridge is in no way dependent upon the type of network that the devices reside on, the combination with an IP network to achieve the predictable results of being able to communicate from UPnP devices to non-UPnP devices.

24. In regards to claims 16, 25, and 34 Cheng discloses, wherein the converter is a stand-alone device (**Fig. 1 #200**).

25. In regards to claims 17, 26, 35, and 42 Cheng discloses, wherein the converter is implemented within the universal plug and play type device or the rendezvous type device (**¶0090**).

26. In regards to claims 18, 27, 36, and 43 Cheng discloses, wherein the universal plug and play type interface circuit comprises a universal plug and play type proxy (**Fig. 5 #220 and ¶0031**) which maintains a table of entries, each entry corresponding to a rendezvous type device (**Fig 5. #504 and ¶0035**).

27. In regards to claim 20 Cheng discloses, a converter (**Fig 1 #200**) configured for coupling between a universal plug and play type device (**Fig. 1 #120**) and a rendezvous type device (**Fig. 1 #150-180**) to convert communications between the universal plug and play type device and the rendezvous type device into proper formats (**¶0020 line(s) 12-19**), comprising:

- j. a. means for interfacing to a universal plug and play type device configured for coupling to the universal plug and play type device operating under a universal plug and play type protocol (**Fig. 2 #210 and ¶0022 line(s) 1-6**);

- k. b. means for interfacing to a rendezvous type device configured for coupling to the rendezvous type device operating under a rendezvous type protocol (**Fig. 2 #250_{a-d} and ¶0021**); and
- l. c. means for converting coupled between the means for interfacing to a universal plug and play type device and the means for interfacing to a rendezvous type device (**Fig. 1 #200 and Fig. 2**) wherein the means for converting converts communications directed from the universal plug and play type device to the rendezvous type device into the rendezvous type protocol, and further wherein the means for converting converts communications directed from the rendezvous type device to the universal plug and play type device into the universal plug and play type protocol (**¶0022**).
28. Cheng do not teach wherein the rendezvous type protocol utilizes Internet Protocol.
29. In the same field of endeavor Cheshire's teach rendezvous devices (**fig. 1 #102-110**) on a network (**fig. 1 #100**) using the Internet Protocol (**¶0025-0027**).
30. It would have been obvious to one of ordinary skill in the art to have rendezvous devices in an IP network taught by Cheshire for communicating with UPnP devices through a bridge as shown in Cheng, since the operation of the bridge is in no way dependent upon the type of network that the devices reside on, the combination with an

IP network to achieve the predictable results of being able to communicate from UPnP devices to non-UPnP devices.

31. In regards to claim 23 Cheng discloses, wherein a conversion program used by the means for converting is stored within the means for converting (**¶0022**).

32. In regards to claim 24 Cheng discloses, wherein the means for converting is programmed by the universal plug and play type device or the rendezvous type device (**¶0040-¶0042**).

33. In regards to claim 29 Cheng discloses, bridge device (**Fig 1 #200**) configured for coupling between a universal plug and play type device (**Fig. 1 #120**) and a rendezvous type device (**Fig. 1 #150-180**) for converting communications between the universal plug and play type device and the rendezvous type device into proper formats (**¶0020 line(s) 12-19**), comprising:

- m. a. a universal plug and play type interface circuit configured to couple to a universal plug and play type device operating under a universal plug and play type protocol (**Fig. 2 #210 and ¶0022 line(s) 1-6**);
- n. b. a rendezvous type interface circuit configured to couple to a rendezvous type device operating under a rendezvous type protocol (**Fig. 2 #250_{a-d} and ¶0021**); and

c. a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit (**Fig. 1 #200 and Fig. 2**), wherein the conversion circuit converts communications directed from the universal plug and play type device to the rendezvous type device into the rendezvous type protocol, and further wherein the conversion circuit converts communications directed from the rendezvous type device to the universal plug and play type device into the universal plug and play type protocol (**¶0022**).

34. Cheng do not teach wherein the rendezvous type protocol utilizes Internet Protocol.

35. In the same field of endeavor Cheshire's teach rendezvous devices (fig. 1 #102-110) on a network (fig. 1 #100) using the Internet Protocol (¶0025-0027).

36. It would have been obvious to one of ordinary skill in the art to have rendezvous devices in an IP network taught by Cheshire for communicating with UPnP devices through a bridge as shown in Cheng, since the operation of the bridge is in no way dependent upon the type of network that the devices reside on, the combination with an IP network to achieve the predictable results of being able to communicate from UPnP devices to non-UPnP devices.

37. In regards to claim 32 Cheng discloses, wherein a conversion program used by the conversion circuit is stored within the conversion circuit (**¶0022**).

38. In regards to claim 38 Cheng discloses, a network of devices, operating under a plurality of protocols (**Fig. 1 #100**), the network of devices comprising:

- p. a. one or more universal plug and play type devices operating under a universal plug and play type protocol (**Fig. 1 #100 and ¶0020 line(s) 12-19**);
- q. b. one or more rendezvous type devices operating under a rendezvous type protocol (**Fig. 1 #100 and ¶0020 line(s) 12-19**); and
- r. a converter configured to couple between a universal plug and play type device and a rendezvous type device to convert communications between the universal plug and play type device and the rendezvous type device into proper formats (**Fig. 1 #200 and ¶0020 line(s) 12-19**), comprising:
 - i. a. a universal plug and play type interface circuit configured to couple to a universal plug and play type device operating under a universal plug and play type protocol (**Fig. 2 #210 and ¶0022 line(s) 1-6**);
 - ii. b. a rendezvous type interface circuit configured to couple to a rendezvous type device operating under a rendezvous type protocol (**Fig. 2 #250_{a-d} and ¶0021**); and
 - iii. c. a conversion circuit coupled between the universal plug and play type interface circuit and the rendezvous type interface circuit (**Fig. 1 #200 and Fig. 2**), wherein the conversion circuit converts communications directed from the universal plug and play type device to the rendezvous type device into the rendezvous type protocol, and further wherein the

conversion circuit converts communications directed from the rendezvous type device to the universal plug and play type device into the universal plug and play type protocol (**¶0022**).

39. Cheng do not teach wherein the rendezvous type protocol utilizes Internet Protocol.

40. In the same field of endeavor Cheshire's teach rendezvous devices (**fig. 1 #102-110**) on a network (**fig. 1 #100**) using the Internet Protocol (**¶0025-0027**).

41. It would have been obvious to one of ordinary skill in the art to have rendezvous devices in an IP network taught by Cheshire for communicating with UPnP devices through a bridge as shown in Cheng, since the operation of the bridge is in no way dependent upon the type of network that the devices reside on, the combination with an IP network to achieve the predictable results of being able to communicate from UPnP devices to non-UPnP devices.

42. In regards to claim 41 Cheng discloses, wherein the converter is a stand-alone device coupled between the universal plug and play type devices and the rendezvous type devices (**Fig. 1 #200**).

43. Claims 19, 28, 37, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US PGPub 2002/0078161) and Cheshire (US PGPub 2005/0044355) as applied to claims 6,11, 20, 29, and 38 above, and further in view of Cho (US PGPub 2003/0016682).

44. In regards to claims 19, 28, 37, and 45 neither Cheng nor Cheshire discloses, wherein the rendezvous type interface circuit comprises a rendezvous type proxy which maintains a table of entries, each entry corresponding to a universal plug and play type device.

45. In the same field of endeavor Cho teaches a generic middleware agent that includes a table that has entries corresponding to the UPnP devices and rendezvous-type-devices (**Fig. 3 #310 and ¶0042**). This would have been an advantageous addition to the system disclosed by Cheng and Cheshire since it would have allowed the various devices types to be tracked, to ensure that the interface can identify which protocols are used by the various devices and ensure that messages are converted into the proper format before transmission to a particular device.

46. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cheng's UPNP enabling device for heterogeneous network of slave devices and Cheshire's method and apparatus for accelerating the expiration of resource records in a local cache with Cho's teaching as discussed above to allow for the capability of having an updated list of available devices

and device types, to ensure that the correct protocol and addressing information is used to communicate with a particular device.

Conclusion

47. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON STRANGE whose telephone number is (571)272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron Strange/
Primary Examiner, Art Unit 2448